

# POLICY AND COMMUNICATIONS BULLETIN

## THE CLINICAL CENTER

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Medical Administrative Series

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M92-8 (rev.)

18 July 2000

### MANUAL TRANSMITTAL SHEET

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SUBJECT: Intravenous Potassium Chloride Infusions

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1. Explanation of Material Transmitted: This bulletin transmits the Clinical Center policy and accompanying guidelines for the infusion of intravenous potassium chloride. The policy was reviewed by the Medical Executive Committee on 18 July 2000 and approved with changes to pediatric dosage limits.
2. Material Superseded: MAS No. M92-8 (rev.), dated 20 May 1997
3. Filing Instructions: Pharmacy Section

Remove: No. M92-8 (rev.), dated 20 May 1997

Insert: No. M92-8 (rev.), dated 18 July 2000

#### Distribution:

Physicians, Dentists and Other Practitioners Participating in  
Patient Care

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M92-8 (rev.)

18 July 2000

SUBJECT: Intravenous Potassium Chloride Infusions

### PURPOSE

The purpose of this issuance is to transmit the Clinical Center policy and accompanying guidelines for the infusion of intravenous potassium chloride. The concentrations of potassium chloride infusions are based on medical, pharmacologic, and intravenous therapy literature. They are prescribed to insure the safe administration of potassium and to prevent injury or complications to the patient.

### POLICY

Intravenous potassium chloride infusions will be administered in the concentrations, by the administration routes, at the infusion rates, and with the identified monitoring parameters shown below.

### DEFINITIONS

In this issuance, monitored is defined as continuous cardiac monitoring by qualified personnel during the entire duration of the infusion.

A central line is defined as a large bore catheter that is inserted into a central vessel and whose distal tip resides in the superior vena cava and/or the subclavian, femoral vein or right atrium. The catheter may be a temporary or permanently tunneled catheter which includes vascular venous access devices. Peripherally inserted central venous catheters (PICC) are also included in this definition.

A peripheral line is defined as a temporary catheter residing in a peripheral vessel.

The definition of a "run" of intravenous potassium refers to a temporary infusion that is infused over 30 minutes to 2 hours and is utilized for replacement therapy to treat hypokalemia.

The definition of a "large volume" infusion of potassium in adults pertains to the use of 1000 milliliters of solution for the admixture.

	<u>Monitored</u>	<u>Minimum Delivery Time</u>	<u>Unmonitored</u>	<u>Minimum Delivery Time</u>
<u>Peripheral Line</u>				
Runs	10mEq/100mL	30 min (200mL/hr)	10mEq/100mL	40 min (150mL/hr)
Large volume	100mEq/1000mL	5 hr (200mL/hr)	80mEq/1000mL	5 hr 20 min (187mL/hr)
<u>Central Line</u>				
Runs	40mEq/100mL	2hr (50mL/hr)	20mEq/100mL	1 hr 20 min (75mL/hr)
Large volume	100mEq/1000mL	5hr (200mL/hr)	80mEq/1000mL	5 hr 20 min (187mL/hr)

Maximums:

	<u>Monitored</u>	<u>Unmonitored</u>
Adult	20mEq/hr	15mEq/hr
Pediatric*	1mEq/kg/hr (Maximum of 20mEq/hr)	0.5mEq/kg/hr (Maximum of 15mEq/hr)

\* For children weighing less than 40 kg the infusion rate should not exceed 10mEq/hr.

## GUIDELINES

- (1) The Clinical Center Pharmacy Department will provide potassium chloride infusions in pre-mixed concentrations and volumes of:

10mEq/50mL,  
10mEq/100mL,  
20mEq/100mL,  
40mEq/100mL,  
80mEq/1000mL,  
and 100mEq/1000mL.

Concentrations will not exceed 0.4mEq/mL.

- (2) The maximum hourly potassium chloride infusion rate in an unmonitored setting will be 15mEq/hr for adult patients and 0.5mEq/kg/hr (up to 15mEq/hr) for pediatric patients (not to exceed 10mEq/hr in children weighing <40 kg).
- (3) The maximum hourly potassium chloride infusion rate in a monitored setting will be 20mEq/hr for adult patients and 1mEq/kg/hr (up to 20mEq/hr) for pediatric patients (not to exceed 10mEq/hr in children weighing <40 kg).
- (4) The maximum hourly potassium chloride infusion rate should be calculated by adding all intravenous sources of potassium.
- (5) Intravenous infusion pumps must be used for all runs of potassium and for all large volume infusions with concentrations >40mEq/1000ml.
- (6) The recommended runs may be halved but not multiplied (e.g., a central run in a monitored patient may be 20mEq/50ml but should not be 80mEq/200ml over 4 hours).
- (7) Potassium solutions should not be mixed to produce concentrations exceeding those listed. Exceptions may be made on an individual basis for patients receiving parenteral nutrition (TPN).